

## Howard Radio Co.

**Model: 474**

**Chassis:**

**Year: Pre 1949**

**Power:**

**Circuit:**

**IF:**

**Tubes:**

**Bands:**

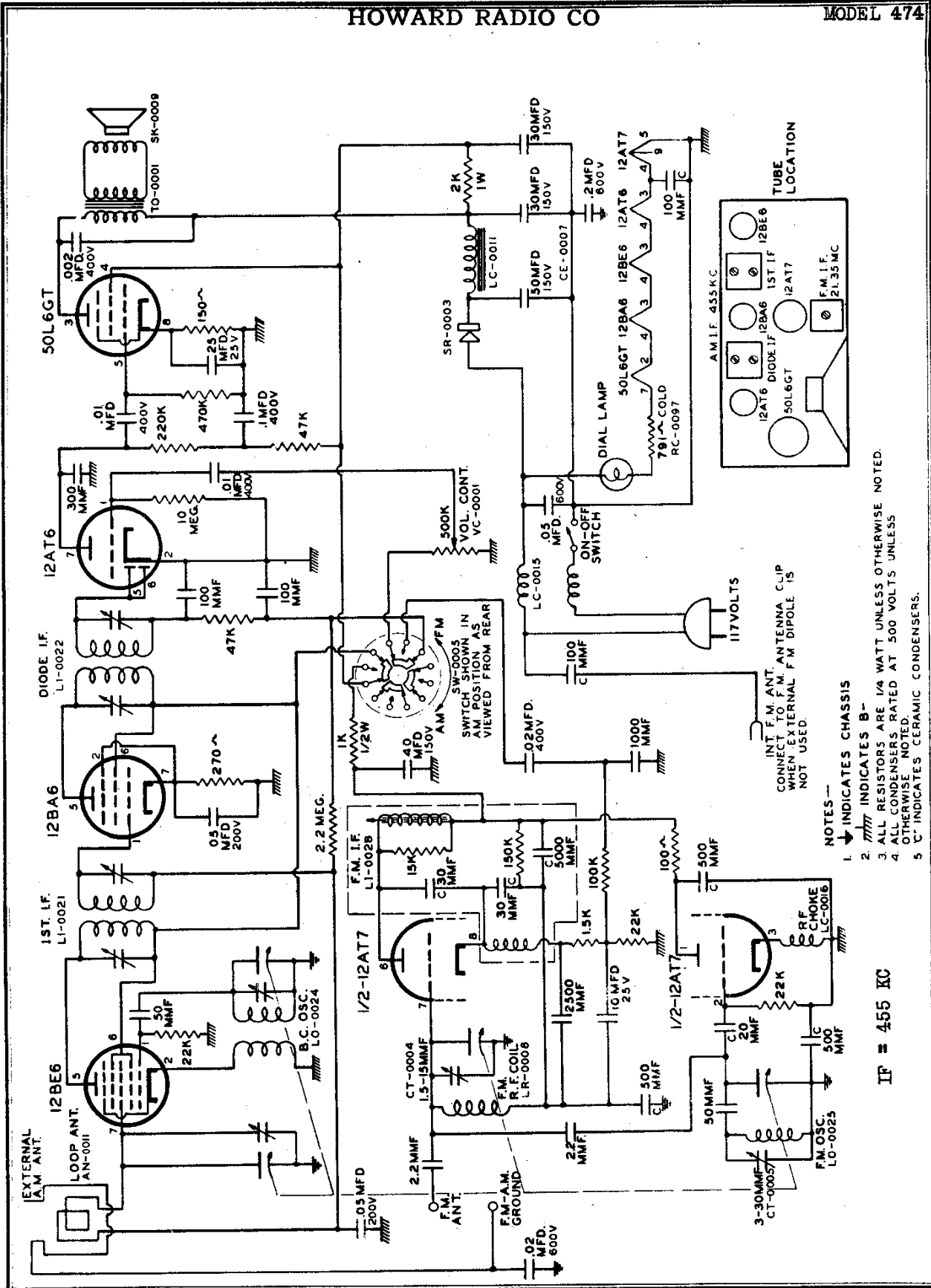
### Resources

[Riders Volume 17 - HOWARD 17-11](#)

[Riders Volume 17 - HOWARD 17-12](#)

[Riders Volume 17 - HOWARD 17-13](#)

[Riders Volume 17 - HOWARD 17-14](#)

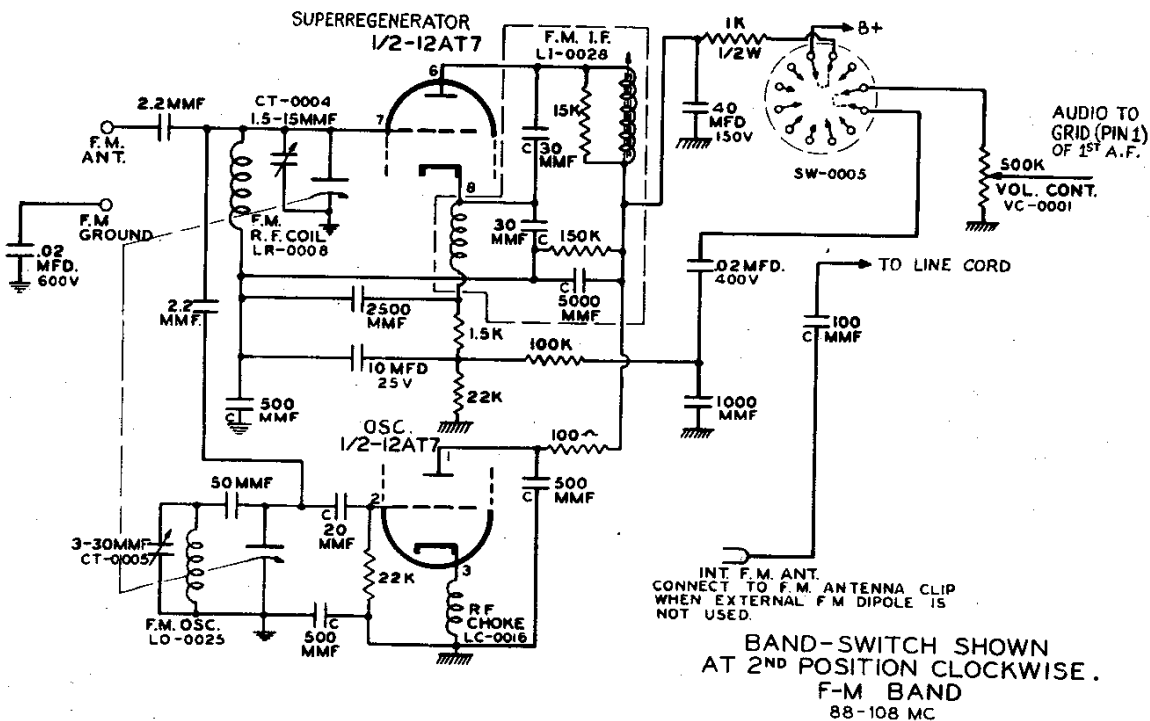
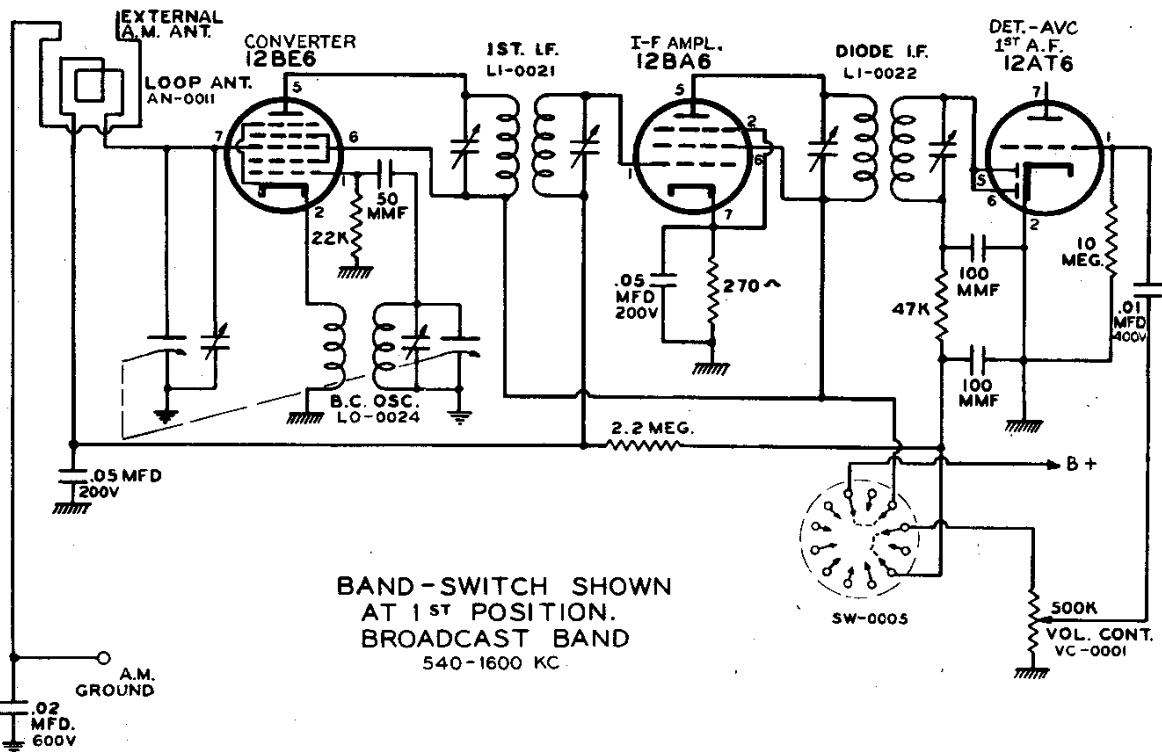


INT. F.M. ANT. CONNECT TO F.M. ANTENNA CLIP WHEN EXTERNAL F.M. DIPOLE IS NOT USED.

- NOTES -
1. ↓ INDICATES CHASSIS
  2. ▨ INDICATES B-
  3. ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE NOTED.
  4. ALL CAPACITORS RATED AT 500 VOLTS UNLESS OTHERWISE NOTED.
  5. C\* INDICATES CERAMIC CAPACITORS.

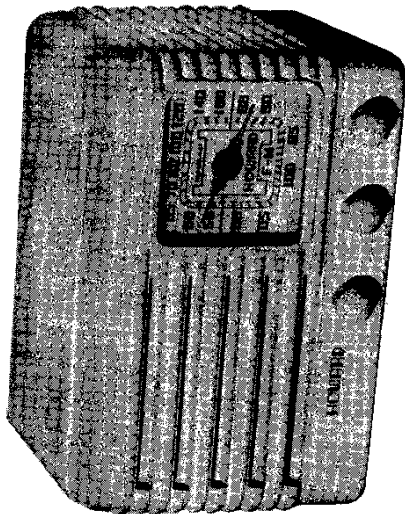
IF = 455 KC

# "clarified schematics"



HOWARD RADIO CO

MODEL 474

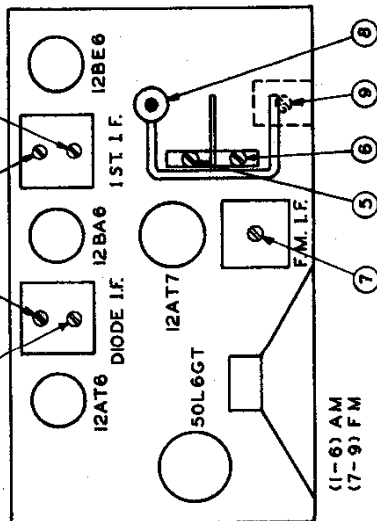


See Dummy Antenna Chart	Sig. Gen. Connection To	Gen. Freq.	Band Position	Dial Setting	Order of Trimmer Adj.	FUNCTION	See Note
2	Grid of 12BE6	455 K.C.	B.C.	Off Station	① ② ③ ④	I.F. Peak to Max. Output	
1	A.M. Ant. Clip	1400 K.C.	B.C.	1400 K.C.	⑤ ⑥	B.C. Osc. and R.F.	A
2	F.M. Ant. Clip	21.35 M.C.	F.M.	Off Station	⑦	F.M.-I.F.	B
3	F.M. Ant. Clip	105 M.C.	F.M.	105 M.C.	⑧ ⑨	F.M. Osc. Peak to Max. Output	C

Note A. Set pointer in horizontal position with condenser gang closed.

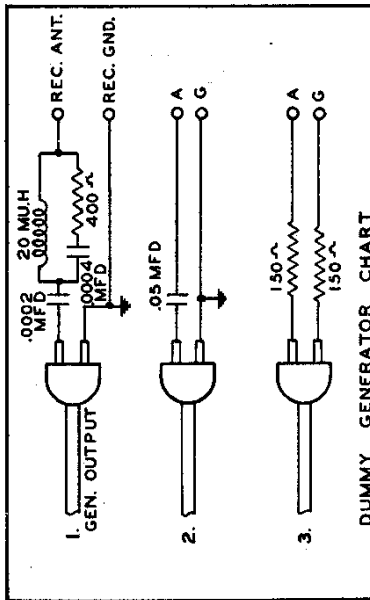
Note B. Adjust for minimum noise with modulation off.

Note C. Adjust ⑧ to 105 M.C.- Oscillator section. While adjusting ⑧, rock condenser gang slowly back and forth for point of optimum. Check tracking of R.F. at 90 to 100 M.C.



TRIMMER LOCATION CHART

No. 9 adjustment up beneath chassis.



DUMMY GENERATOR CHART

POWER SUPPLY: (Standard Models) 105 to 125 V. AC-DC. 25 to 60 cycle. (Write our Export Sales Manager relative to special voltages). Consumption 30 watts. See label on back of chassis.

ANTENNA SYSTEM: Built in loop on back of cabinet for AM reception. Provision is also made for use of outside antenna on AM distant reception. Built in FM antenna, but provision is also made for exterior FM aerial, either dipole or single wire. (See antenna instructions on rear of cabinet.) If distortion occurs on strong FM local stations, remove antenna from clip marked "FM. ANT" on rear of cabinet and leave disconnected.

TUNING RANGE: FM 88 to 108 M.C.  
AM 540 to 1600 K.C.

TUBE COMPLIMENT

TU-12AT6 Tube  
 TU-12BA6 Tube  
 TU-12BE6 Tube  
 TU-12AT7 Tube  
 TU-50L6 Tube  
 SW-0005 Band Switch  
 CB-0002 Plastic Cabinet - Ivory  
 CB-0004 Plastic Cabinet - Mottled Walnut  
 CA-0038 Line Cord with plastic plug (6 feet)  
 SR-0003 MISCELLANEOUS  
 PR-0097 Selenium Rectifier  
 MP-0324 Base Clip for Tube Shield  
 PR-0096 Gang Cover  
 RC-0097 Miniature Tube Shield  
 Negative Temp. Coefficient Resistor  
 (takes surge off pilot light voltage)

SOCKET VOLTAGE READINGS

Tube	Function	Cath.	Screen Grid	Plate
12BE6	Mixer	0	100	98
12BA6	I.F. Amp.	1	100	98
12AT7	FM Tube	Pin 8 14 V.	-	120
12AT6	Det.	0	0	65
50L6	Output	6.8	100	130

All voltages taken from the buss bar (B-) to the socket contacts, with a 20,000 Ohm per volt D.C. meter and the line voltage fixed at 117 Volts A.C.

PARTS LIST

474-FM

VC-0001 Volume Control & On-off Switch  
 AC-0009 CONDENSERS  
 CE-0016 Tuning Gang with Mounting Assy.  
 CE-0017 Capacitor Electrolytic 40 Mfd. 150 volts  
 CE-0019 Capacitor Electrolytic 10 Mfd. 150 volts  
 CE-0007 Capacitor Electrolytic 50-30-30 Mfd. 150 volts  
 CE-0005 Capacitor Electrolytic 25 Mfd. 25 volts  
 AN-0011 COILS  
 LC-0024 Loop Antenna  
 LI-0021 Broadcast Oscillator Coil  
 LI-0022 1st I.F. Transformer  
 LC-00016 2nd I.F. Transformer  
 LO-0025 F.M. - R.F. Choke Coil  
 LR-0008 F.M. Osc. Coil  
 LI-0028 F.M. - R.F. Coil  
 SM-0074 F.M. - I.F. Transformer  
 HD-0002 DIAL AND CONTROL ACCESSORIES  
 SL-0004 Dial Drive Shaft  
 LS-0001 Dial Pointer Hand  
 AR-0064 Dial Light Socket  
 SP-0010 Dial Lamp Type #47, Min. Bayonet  
 GR-0001 Calibrated Dial Plate  
 WG-0001 Dial Cord Spring - 8 Oz. load  
 Rubber Grommet  
 Dial Window  
 KB-0003 KNOBS  
 KB-0003-1 Knob - White  
 KB-0005 Knob - White Stamped "AM-FM"  
 KB-0005-1 Knob - Brown  
 KB-0005-1 Knob - Brown Stamped "AM-FM"  
 SO-0009 SOCKETS  
 SO-0022 Socket - 8 Prong  
 SO-0013 Tube Socket - 9 Pin - Low Loss Bakelite  
 Tube Socket - 7 Pin  
 SK-0009 SPEAKER  
 Speaker 5" P.M.  
 TO-0001 TRANSFORMER  
 LC-0011 Speaker output Transformer  
 LC-0015 Power Choke (150 Ohms D.C.)  
 A.C. Input Choke